

CLEAN WATER ACT INDIAN SET ASIDE GRANT PROGRAM



SUCCESS STORY

Koyuk Alaskan Native Village, Alaska

The Alaskan Native Village of Koyuk is located at the mouth of the Koyuk River, at the northeastern end of Norton Bay on the Seward Peninsula, 90 air miles northeast of Nome. Koyuk is a traditional Unalit and Malemiut Eskimo village of approximately 230 people where residents speak a dialect of Inupiat Eskimo. Residents of the village maintain a subsistence lifestyle in which the Koyuk River and the small creeks that run through the community play vital roles. Fish are caught directly from the Koyuk River, and the community's other sources of meat, include reindeer, seal, beluga whale and moose. In addition, water from these creeks is used for drinking, cooking, and cleaning fish and game.



The community's sanitation facilities consisted of outhouses and "honey bucket bunkers". When the buckets were full, they were hand-carried by residents to a disposal area and dumped. Public health and public drinking water supplies were threatened by these sanitation methods. For example, subsistence catches were cleaned in areas in close proximity to honey bucket bunkers and the raw sewage which surrounds them. During the period of August 1988 through March 1989, over 40 hepatitis cases (approximately 20% of the community) were reported in Koyuk. This outbreak

was attributed to unsafe water supplies and wastewater disposal practices.

During the 1970s and 1980s, Koyuk and the Indian Health Service worked together to construct several sanitation facilities in the village. By 1990, the existing wastewater facilities were a city-installed septic tank/drain field system, two toilets in the washeteria, and the pit privies/honey bucket bunker system described above. The school used a poorly operating Bio-Pure wastewater treatment plant and the effluent was discharged to a small stream that ran through the village.

A sewer collection and treatment/disposal system was needed, as were new pits and new privy locations for those homes that would not be connected to the proposed community sewer system. Koyuk decided it wanted a piped water distribution and wastewater collection system. They also decided to complete their infrastructure needs in a phased approach because of the magnitude of the proposed system and its cost. Residents needed to ensure that they matched construction phases with available funding.

In 1991, the EPA awarded a \$1.2 million Indian Set-Aside (ISA) grant to Koyuk to construct a specific phase of the overall project. The funding contributed to the construction of a sewer collection system, treatment, and disposal lagoon system for 51 buildings for the western part of the village and the school. However, because of unexpected conditions at the site of the proposed sewage lagoon, the lagoon had to be relocated and redesigned. In 1996, EPA's ISA program provided an additional grant totaling \$434,000 to provide a geotextile and geomembrane wastewater treatment lagoon liner for the relocated lagoon.

EPA's total funding of \$1.6 million provided for a wastewater collection system and a lagoon that was completed in 1996. This funding helped to improve the public health of many native residents by providing safe water supplies and adequate sewage disposal systems. This project was a success in that it was part of a multi-phased construction effort where the community planned the construction phases to coincide with available monies. In addition, the village worked with several funding agencies to ensure funding for the entire project, and helped to overcome difficulties in the ultimate design of the lagoon.